ENVIRONMENT AND NATURAL RESOURCES

OVERVIEW

MISSION

Environment and Natural Resources (ENR) works with all people and interested organizations to protect our environment by making sure our resources are used wisely and that people understand their part in keeping the environment healthy.

GOALS

1. The NWT's air, land, water, wildlife, and forests are protected.
2. The NWT's natural resources are used and developed wisely in accordance with the Sustainable Development Policy.
3. Knowledge is gained through cooperating and sharing information with other organizations and people interested in the environment.
4. The NWT's environment and natural resources are managed with the understanding that forests, wildlife, air, land and water are connected.

PROPOSED BUDGET

Compensation & Benefits	$25,893,000
Grants & Contributions	$1,541,000
Other O&M	$27,556,000
Amortization	$1,991,000
Infrastructure Investment (Capital)	$1,168,000

PROPOSED POSITIONS

Headquarters (HQ)	83 positions
Regional/Other Communities	216 positions

KEY ACTIVITIES

- *Corporate Management*
- *Environment*
- *Forest Management*
- *Wildlife*

STRATEGIC ACTIONS

The Department will take the following actions in support of the government's strategic initiatives:

- *Protect Territorial Water (Managing This Land Initiative)*
- *Mitigate and Adapt to Climate Change Impacts (Managing This Land Initiative)*
- *Improve Environmental Monitoring Efforts (Managing This Land Initiative)*
- *Environmental Stewardship (Managing This Land Initiative)*
- *Maximize Benefits from Resource Development (Maximizing Opportunities Initiative)*
- *Address Factors that Impact the Cost of Goods (Reducing the Cost of Living Initiative)*

EMERGING ISSUES

Opportunities and Challenges

The natural environment is constantly changing through natural forces and human actions. Current human activities in the Northwest Territories include expansion of communities; mineral, oil and gas exploration and development; and, harvesting of fish, wildlife and forest resources. Increased human activities result in increased risk and pressure on the environment.

NWT residents look to Environment and Natural Resources (ENR) as the lead Government of the Northwest Territories (GNWT) agency to manage, and provide up-to-date information on the environment, wildlife and forest resources, and advise on best practices to guide development. The Department must monitor the environment effectively to detect and assess changes and recommend ways to mitigate potentially harmful impacts.

Many agencies participate in the environmental and natural resource management in the NWT. These include regulatory boards (land and water boards, environmental impact boards), governments (federal, territorial and Aboriginal) and co-management boards. It is challenging to preserve healthy ecosystems in a complex operating environment. The main legislative instrument governing resource management in the NWT is the federal *Mackenzie Valley Resource Management Act* (MVRMA). The *Act* addresses land use planning, land and water use, environmental impact assessment and environmental monitoring. ENR is the lead GNWT department on the implementation of the MVRMA. In the Inuvialuit Settlement Region, these matters are addressed by the Inuvialuit Final Agreement, and the federal *Territorial Lands Act*, *Northwest Territories Waters Act* and *Canadian Environmental Assessment Act*.

Managing input into these processes while ensuring the social, cultural, and economic aspects of a public government are brought forward in a timely manner is a significant challenge. Guided by the GNWT's Sustainable Development Policy, ENR promotes innovation while working with many partners on sustainable resource and environmental management.

ENR leads, or participates, in multiple initiatives to manage land use or natural resources, including the NWT Protected Areas Strategy. ENR initiatives are designed to assess the biophysical environment, especially forest resources, wildlife populations, wildlife habitat and air quality in, and around communities. The GNWT provides technical advice to regulators on the development of terms and conditions of permits and licenses; works proactively with others to improve the understanding of the impact of community and industrial development on the natural environment; and, promotes "best management practices" that may prevent, reduce or mitigate impacts.

Implementing co-management regimes under existing and new land claim agreements provides opportunities for new ways of doing business to ensure stewardship activities are collaborative and management actions meet needs of communities and respect Aboriginal rights.

The GNWT Strategic Plan, based on the priorities of the 16th Legislative Assembly, recognizes the need to work collaboratively with management partners and the public to protect our environment and ensure the wise and sustainable use of our resources.

This collaborative approach will allow us to meet the challenges and complexity of the many issues facing resource and land management in the NWT. ENR will address these issues by undertaking a range of activities to protect territorial waters, mitigate and adapt to climate change, and improve environmental monitoring and stewardship.

Issues

While the NWT has an abundance of natural resources, our environment is facing pressures from industrial and community development, a changing climate and natural forces. Development of our natural resources continues at a rapid pace. The environmental management regime continues to evolve to keep pace with demand for development and the changing political realities in the NWT. Aboriginal governments, land claims organizations and other regional and community organizations are taking on greater roles in managing natural resources. Given the number of, and variety of, parties involved and the broad range of regulatory and other processes involved, environmental management in the NWT is becoming more complex. This complexity is increased by the impact of development in neighbouring jurisdictions on NWT waters and ecosystems.

The GNWT's ability to effectively assess the impacts of development and mitigate resulting cumulative effects depends on the quality and quantity of information available. Baseline data gathered by ENR is used to compare the state of the environment before, during and after development occurs and to ensure appropriate management actions are taken as changes are detected. Baseline date is required for resource management, land use planning, establishing protected areas, environmental assessments and to ensure impacts are avoided or dealt with in an appropriate way for all areas of the NWT. Aboriginal and community government as well as regulatory boards and agencies also require current and reliable information to assess the conditions and health of the air, land, water, wildlife and forests in the NWT.

The GNWT needs capacity to participate effectively in regulatory reviews and manage the impacts of increasing demands for development. A number of major projects will challenge existing resources during the next three years. These include: the conclusion of the Mackenzie Gas Project review process and environmental assessments of the DeBeers' Gahcho Kue, Talston Hydro, Bathurst Inlet Port and Road and Giant Mine Remediation projects and potentially the Canadian Zinc Corporation's Prairie Creek and CanTung projects.

Residents of the NWT value clean and abundant waters and healthy aquatic systems. As a downstream jurisdiction within the Mackenzie River Basin, the NWT must pay attention to upstream water uses in neighbouring jurisdictions, as well as within the NWT, to ensure the ecological integrity of the Basin is maintained. Action is needed to address concerns by NWT residents about impacts of upstream development, particularly the Alberta oil sand industry and British Columbia's proposed hydro expansion.

Climate change remains a serious issue for the NWT. Actions are needed to help the GNWT achieve its greenhouse gas emission target for its own operations of 10 percent below 2001 levels by 2011. Energy management programs will become increasingly more in demand as the price of fuel continues to rise and NWT residents, communities and businesses try to reduce their energy costs. These programs will also assist in reducing greenhouse gas emissions in the NWT. In addition to reducing emissions, there is a need to identify and co-ordinate climate change adaptation activities in the NWT. These will involve adjustments to practices and behaviour to reduce our vulnerability to climate change related impacts.

Wildfires are part of how wildlife habitat and forests are renewed. The threat of wildfires impacting communities in the forested areas of the NWT requires a broader-based solution than those provided by forest fire suppression and emergency responses alone. There is a need to develop community protection plans to help minimize risk and potential damage caused by wildfire. These plans need to incorporate FireSmart principles and practices and be based on appropriate information including fuel hazard assessments for areas in the wildland/urban interface.

The NWT shares responsibility with neighbouring jurisdictions for managing several wildlife populations, including a number of endangered or threatened species. Shared populations include barren-ground, mountain and woodland caribou as well as polar bear. These species play an important role in the cultural, economic and spiritual lives of many NWT residents. Common management agreements need to be developed to ensure human activities do not impact on the heath or productivity of these wildlife species. Co-management processes have been established to provide input into the management of various species and their habitat. Using traditional knowledge and scientific information, Aboriginal and government representatives work together to advise government on management decisions affecting these shared species.

ENR will take actions to support the Managing This Land, Maximizing Opportunities and Reducing the Cost of Living Initiatives.

FISCAL POSITION AND BUDGET

Departmental Summary

(Thousands of dollars)

	Proposed Main Estimates 2009-2010	Main Estimates 2008-2009	Revised Estimates 2007-2008	Main Estimates 2007-2008
OPERATIONS EXPENSE				
Corporate Management	10,620	10,094	9,903	9,003
Environment	5,660	5,575	6,105	4,318
Forest Management	26,892	26,536	32,659	30,542
Wildlife	13,809	14,737	14,256	13,281
TOTAL OPERATIONS EXPENSE	56,981	56,942	62,923	57,144
REVENUES	2,738	2,347	2,168	2,168

Operation Expense Summary

(Thousands of dollars)

	Main Estimates 2008-09	Proposed Adjustments: Sunsets and Other Approved Adjustments	Proposed Adjustments: Reductions	Proposed Adjustments: Forced Growth	Proposed Adjustments: Strategic Initiatives	Proposed Adjustments: Internal Reallocation of Resources	Proposed Budget 2009-10
Corporate Management							
Directorate	2,105		(77)				2,028
Field Support	356				180		536
Policy, Legislation & Communications	1,854	(10)			336		2,180
Corporate Costs	2,989						2,989
Shared Services	2,731	28	(30)				2,729
Amortization	59	99					158
Total Activity	10,094	117	(107)	-	516	-	10,620
Environment							
Program Management	429						429
Environmental Protection	1,757				200		1,957
Energy Management	2,085	(410)			350		2,025
Environmental Assessment & Monitoring	1,304		(55)				1,249
Amortization	-						-
Total Activity	5,575	(410)	(55)	-	550	-	5,660
Forest Management							
Program Management & Presuppression	17,505		(371)	795	210		18,139
Suppression	4,540						4,540
Forest Resources	3,126		(421)				2,705
Amortization	1,365	143					1,508
Total Activity	26,536	143	(792)	795	210	-	26,892
Wildlife							
Wildlife Management	13,767	(1,135)	(421)		599		12,810
Protected Areas	674						674
Amortization	296	29					325
Total Activity	14,737	(1,106)	(421)	-	599	-	13,809
TOTAL DEPARTMENT	56,942	(1,256)	(1,375)	795	1,875	-	56,981

Revenue Summary

(Thousands of dollars)

	Proposed Main Estimates 2009-2010	Main Estimates 2008-2009	Revised Estimates 2007-2008	Main Estimates 2007-2008
Grant from Canada				
Grant 1				
Grant 2				
Transfer Payments				
Transfer 1				
Transfer 2				
Taxation Revenues				
Tax 1				
Tax 2				
General Revenues				
Timber Permits and Licenses	25	25	25	25
Hunting and Fishing Licenses	800	800	800	800
Beverage Container Program	570	179	0	0
	1395	1004	825	825
Other Recoveries				
Mutual Aid Resource Sharing Agreement	300	300	300	300
Current portion of Deferred Contribution	1043	1043	1043	1043
	1343	1343	1343	1343
Grants in Kind				
Capital				
Deferred Capital Contributions				
Other				
TOTAL REVENUES	**2,738**	**2,347**	**2,168**	**2,168**

CORPORATE MANAGEMENT

Description

The Corporate Management activity is carried out through the Directorate; Policy, Legislation and Communications; Corporate Shared Services (Finance and Administration and Informatics); and Field Support.

Divisions within this activity enable the Department to respond effectively to environmental and resource management issues of concern to the NWT residents. This activity promotes and undertakes: strategic planning; policy development; public education and information; compliance with environmental and renewable resource law; financial management and administration services; and geographic information system (GIS) and database system development and management so timely information is available to decision-makers and the public.

Corporate Management leads GNWT efforts to promote water resources management that protect water quality, quantity and aquatic ecosystem integrity. As well, Corporate Management coordinates Departmental input into negotiation of Aboriginal lands, resources and self-government agreements; federal land and water legislation reviews; land use planning; cumulative effects assessment and management; federal-provincial-territorial initiatives; and negotiations for devolution of land and resources management with the federal government.

Major Program and Service Initiatives 2009/10

Specific Corporate Management legislation, information management, and water resources management initiatives, are detailed elsewhere in this document.

Regional Land Use Planning
Corporate Management will publish the first annual report on GNWT engagement in collaborative land use planning initiatives.

Policy Development
As a basis for future development of protocols with Aboriginal governments and agencies, Corporate Management will develop an ENR traditional knowledge implementation framework through engagement of Aboriginal governments and resource management agencies. Implementation successes and protocols developed will be shared with other departments for review and use, as appropriate.

Corporate Management will review and report on ENR's implementation of the Sustainable Development Policy (SDP).

A Field Support Unit will be established for regional activities related to preparing public education and information, compliance, traditional knowledge, training, maintaining central databases on licensing and permitting, and provide logistical support.

Four Year Business Plan Update

Results to Date

Corporate Management undertakes legislation, information management and water resources management initiatives, which are detailed elsewhere in this document.

Regional Land Use Planning

In 2008-09, Corporate Management coordinated GNWT input into the evolving interim Dehcho Land Use Plan and early drafts of the Sahtu Land Use Plan. Earlier participation in land use planning led to the development of a high level framework used to inform regional land use planning initiatives. Discussion on how to address cumulative effects management through regional land use planning evolved in the Dehcho land use planning process.

Policy Initiatives

Corporate Management undertook the development of a Traditional Knowledge Implementation Framework (TKIF) to better address internal and inter-departmental obligations. Priorities identified included: a need to improve overall coordination within the GNWT; awareness, orientation and training opportunities for employees and others; and development of stronger and more effective collaborative relationships with holders of TK through their Aboriginal governments and cultural agencies.

KEY ACTIVITY 1: ENVIRONMENT

Description

The Environment Division works with other departments, governments, industry and citizens to maintain a high quality environment for the benefit of current generations. The Environmental Protection section works to prevent and reduce the impact of human activities on the natural environment by providing information, advice and programs in the areas of contaminated sites, hazardous substances, solid and hazardous wastes and air quality. The Energy Management section coordinates the GNWT's response to climate change by developing strategies and activities to control and inventory greenhouse gas emissions, identify climate change impacts, increase awareness of climate change and adapt to a warming climate. Working in partnership with the Arctic Energy Alliance, this section encourages energy conservation and the use of energy efficient technologies and alternative energy sources. The Environmental Assessment and Monitoring Unit coordinates Departmental input into preliminary screenings of regulatory applications and renewal of permits and licences as well as the GNWT's participation in environmental assessments and environmental impact reviews.

Major Program and Service Initiatives 2009/10

ENR will be expanding the waste reduction and recovery program. The intention is to add programs or initiatives to manage paper and cardboard, milk containers and single use retail bags.

A plan will be developed and implemented to address critical needs for information and coordination to assist departments to incorporate climate change considerations into decision making and to assist non-GNWT interests to adapt to climate change impacts. The plan will improve regional climate change scenarios; improve information on permafrost vulnerability in areas of critical infrastructure; and provide support to other GNWT departments, communities and regional and Aboriginal governments that are addressing adaptation problems.

Delivery of energy efficiency and conservation programs, including support for the Arctic Energy Alliance, Energy Efficiency Incentive Program, Energy Conservation Program, Alternative Energy Technology Program, support for community energy planning and public education and awareness will be enhanced. Tracking and reporting of greenhouse gas (GHG) emissions will be enhanced through GNWT membership with The Climate Registry.

The Environment Division will provide leadership in the implementation of alternative energy solutions including community wind energy and biomass energy projects. Working with communities and energy partners, the GNWT will facilitate the installation of wind turbines in Tuktoyaktuk and develop plans for biomass energy in the southern NWT.

ENR will provide leadership and coordination for GNWT participation in the review and response to the Mackenzie Gas Project (MGP) Joint Review Panel Report, preparing for and participating in the MGP regulatory review process and coordinating GNWT input to reviews of oil and gas and mineral development proposals.

Four Year Business Plan Update

Results to Date

The consultation process for the waste reduction and recovery program expansion has been completed and a report on the consultation has been prepared. Based on the results from the consultation, ENR plans to expand the waste reduction and recovery program to include programs and/or initiatives targeting electronics, milk containers, paper and cardboard, and single use retail bags over the next five years. Long term plans envision expanding the program to include tires, lead acid batteries and fuel drums.

ENR surveyed GNWT departments and prepared a report on the effects of climate change impacts on their activities and the steps being taken to adapt to those impacts. ENR is now preparing a NWT Climate Change Adaptation Action Plan for release prior to the end of March 2009.

The feasibility of wind electrical generation has been evaluated in several NWT communities and a business model has been developed for design and installation of wind turbines in Tuktoyaktuk.

An Environmental Assessment Tracking System has been designed and implemented to improve environmental assessment and regulatory document tracking and to streamline the collection and coordination of GNWT wide input to review processes.

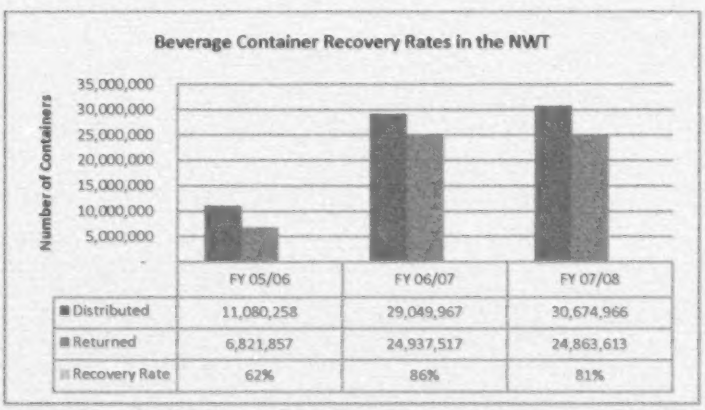
Expertise on water issues has been added to the Environment Division allowing the Department to better represent the GNWT's interest in water protection and management issues.

Measures Reporting

Measures identified in the four year business plan for this activity area.

1 - Annual Recovery Rate of Beverage Containers

The Beverage Container Program was implemented in November 2005. From April 1, 2007 to March 31, 2008, more than 30 million beverage containers were distributed and almost 25 million containers were returned to NWT depots. The rate of recovery for the fiscal year 2007-2008 was 81 percent. Overall, beverage container recovery rates in the NWT are comparable to other deposit-refund programs in Canada.



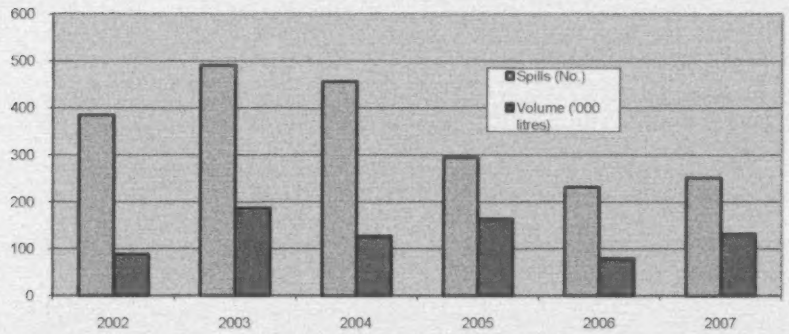
	FY 05/06	FY 06/07	FY 07/08
Distributed	11,080,258	29,049,967	30,674,966
Returned	6,821,857	24,937,517	24,863,613
Recovery Rate	62%	86%	81%

Note: The Beverage Container Program was implemented in November 2005, and therefore only five months of data are available for fiscal year (FY) 05/06.

2 - Number and volume of hydrocarbon spills reported.

Petroleum liquids represented the majority of spills in the Northwest Territories (NWT). There has been a general decrease in the number and volume of spills since 2003. New reporting protocols implemented for the oil and gas exploration and development sector in 2004 and 2005 are reducing the number of small spills (less than 100 litres) being reported.

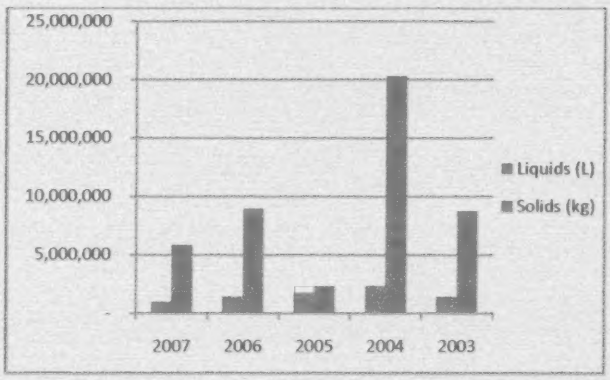
Number and Volume of Hydrocarbon Spills
Northwest Territories, 2002 – 2007



3 - Quantity of hazardous wastes generated and transported off site.

The information described in the tables below accounts for the amount of hazardous waste being consigned from registered generators of hazardous waste to registered receivers of hazardous waste. The receivers may be within the NWT as is the case for facilities that remediate hydrocarbon contaminated soils and waters. The large amount of solids consigned in 2004 is due to contaminated soils being generated by one company (Enbridge Pipelines). The annual amounts are consistent with the fiscal year, April 1 to March 31. The weights and volumes are estimates based on amounts reported in cubic meters but may be considered accurate for general trends.

Hazardous Waste Consignments in the NWT			
Year	Liquids (L)	Solids (kg)	manifests recorded
2007	956,791	5,821,448	565
2006	1,375,632	8,947,990	649
2005	1,738,964	2,264,574	534
2004	2,317,654	20,282,366	617
2003	1,377,317	8,707,863	649



4 - Level of participation in energy conservation and alternative technology programs.

ENR introduced new programs in 2007-2008, the Alternative Energy Technologies Program (AETP) and the Energy Efficiency Incentive Program (EEIP), and continued delivery of the Energy Conservation Program (ECP).

- AETP provided $121,400 to residents and communities for 14 alternative energy projects that will reduce greenhouse gas emissions by 65 tonnes a year and provide savings in energy costs of $23,000. AETP funds also contributed to the hosting of the Remote Community Wind Energy Conference in Tuktoyaktuk.

- EEIP was delivered through the Arctic Energy Alliance. NWT residents received 549 rebates with a total value of $165,550. EEIP funds were also used to fund the "Make the Switch" program through which every household in the NWT was provided two free compact fluorescent light bulbs. Make the Switch cost $103,671 to deliver with expected energy savings for residents of more than $240,000 a year.

- ECP provided funds to communities and non-profit organizations for retrofits of existing facilities to improve energy performance. A total of $93,800 was provided towards seven projects that will reduce greenhouse gas emissions by 89 tonnes a year and provide savings in energy costs of $32,000.

5 - Number of regulatory applications, renewals and environmental assessments handled.

The Environmental Assessment and Monitoring (EAM) Unit coordinated the submission of technical comments and recommendations from ENR divisional and regional staff to resource management boards and agencies on 205 applications. These applications were for water licences and land use permits throughout the territory as well as leases on Commissioner's Land and Federal Crown Lands.

EAM also coordinated the interventions of GNWT departments in 17 environmental assessments involving major and minor resource development projects. The GNWT engages in environmental assessment and environmental reviews of projects within the NWT as well as those in neighbouring jurisdictions that have the potential to affect the NWT environment.

Regulatory Applications 2007-08

Water Licences	29
Land use Permits	93
Leases	40
Screenings	31

Environmental Assessments 2007-08

NWT	15
Nunavut	1
Yukon	0
B.C.	1
Alberta	0

While the number of applications and assessments is a reflection of the level of activity in the NWT, it does not provide a measure of the level of effort required to conduct the regulatory reviews and participate in the environmental assessments.

6 - Annual inventory of total NWT GHG emissions

Greenhouse gas emissions from activities the GNWT has direct operational control over accounted for 61,000 tonnes of carbon dioxide equivalents in calendar year 2006, an increase of six percent since 2001 when GNWT emissions were 57,500 tonnes.

KEY ACTIVITY 2: FOREST MANAGEMENT

Description

The Forest Management Division provides for the stewardship of NWT forests through sustainable management of forest resources and forest fire management.

Sustainable forest management is ensured through the collection of information on the state of forest resources; forest management planning; monitoring of forest health and changes to forest landscapes; regulation of forest practices and planning; and compliance and reporting. Forest fire management is achieved through prevention, preparedness and forest fire response. Using the best science, technology and effective use of available fire response resources, forest fire management provides for the protection of people, property and other values at risk from forest fire. Developing an increased capacity of individuals, communities, industry and others to take responsibility for reducing fire hazards and forest fires is also a priority.

Major Program and Service Initiatives 2009/10

Approaches to delivery of the Forest Management Program are being refocused following reductions to the program. New delivery approaches will provide for the continued delivery of an effective program.

A review of how the Forest Fire Management Policy and Fire Response Guidelines are implemented will be undertaken.

A plan will be developed to implement the new National Forest Strategy in the NWT.

Forest Management Division (FMD) is working with the Canadian Forest Service to complete a carbon accounting pilot project. The objective is to improve estimates of carbon flux for a portion of NWT forests.

The potential for communities and northerners to use forest biomass as a green energy source will be a key focus area. FMD will work with others to assess biomass energy potential in various communities. Community needs will be evaluated and forest resources surrounding the communities will be assessed for suitability and accessibility.

Forest inventory information has been completed for a large area in the Dehcho along the Mackenzie River (2.8 million hectares (ha)). Discussions will be held with communities around landscape resource management planning and forest resource information needs of the communities.

A teacher's guide for elementary grades will be developed on birch tree physiology and ecology.

An action plan is being developed to implement recommendations from a recent report on timber use opportunities.

Territorial processes for timber development are being reviewed to standardize and clarify proposal requirements, and to ensure informed and consistent application reviews.

Application and timber development procedures will be reviewed and revised to improve the platform on which proposed harvest activities are evaluated.

Communication processes with communities and stakeholders are being refined to strengthen the ability to engage other stakeholders and to provide a better forum to develop plans and to resolve concerns.

Regional Wildland Fire Prevention Plans will be developed and implemented across all Regions.

The communities of Tsiigehtchic and Kakisa have been targeted to develop FireSmart Community Interface Protection Plans.

Four Year Business Plan Update

Results to Date

New forest information has been received for 900,000 hectares between Fort Providence and Jean Marie River. In addition, improvements have been made to a portion of the satellite vegetation classification in the Dehcho to include updated attributes for height, volume and density. These additional attributes greatly improve the utility of the Landsat classification.

A Community Forest Resource Assessment was completed for Tulita. The assessment evaluated large stands of timber near the community to determine potential use for fuelwood or saw timber.

FMD is doing a comprehensive audit of a timber license to evaluate actual timber harvested against what was predicted from the timber supply analysis and long term development plan.

As part of school curriculum development, a nature journal is being developed for use by Grade 5 students. The content is complete, artwork, design and layout is currently underway. The journal will be published in the new year.

A project was completed to evaluate the efficiency of a sawmill in Jean Marie River.

Working collaboratively with Municipal and Community Affairs and northern communities, FMD is championing a revised Community Wildland Fire Protection Planning methodology based upon FireSmart principles.

Measures Reporting

Measures identified in the four year business plan for this key activity area.

1 - Area of the NWT having data on the current state of the forest resource.
The forest inventory program is an ongoing activity that provides information on forest vegetation used for resource and land use planning, assessing cumulative effects of development and monitoring to report on changes in our forests. The total area having a detailed level forest inventory information is now at 4,700,000 hectares. This is an increase in area of 900,000 hectares from 2006/2007. During 2007/2008, a new community resource assessment was completed for Tulita bringing the number of community resources assessments done to three.

2 - The volume of timber harvested does not exceed sustainable harvest limits.
During 2007/2008 approximately 25,000 cubic metres of wood was harvested from NWT forests. This volume is similar to the amount harvested annually in the past five years and is significantly below the sustainable harvest limit for the areas where harvest occurred.

3 - Number of community Wildland fire risk mitigation plans completed.
Risk mitigation planning is a new activity in fire management. This enhanced approach to community protection planning focused on methodology development and completion of a pilot plan in the previous reporting period. In 2007/2008, the draft FireSmart Community Interface Protection Plan was presented to the community of Fort Smith and stakeholders for review. Ongoing hazard abatement work continues around the community of Fort Smith.

The communities of Tsiigehtchic and Kakisa have been targeted to develop FireSmart Community Interface Protection Plans.

4 - Number of person caused fires and fire that results from industrial activity.
Until recently person-caused fires have historically not been of concern in the NWT. This has begun to change over the past two to three years with increased development activity on the landscape. In 2006/2007, there were 20 person-caused forest fires in the NWT. This increased to 31 fires in 2007/2008.

KEY ACTIVITY 3: WILDLIFE

Description

Wildlife initiatives assess and monitor wildlife, habitat, species at risk, wildlife health and biodiversity as well as coordinate initiatives to address impacts on wildlife from human activity. Functions include developing plans and programs to support the sustainable use of wildlife resources, preparing public information materials on wildlife management and safety and administering the sport fishery.

Protected Areas provides a secretariat function to the NWT Protected Areas Strategy (PAS) in partnership with Indian and Northern Affairs Canada and Aboriginal, environmental and industry organizations.

Major Program and Service Initiatives 2009/10

Through the Strategic Initiative, Managing This Land, major investments totalling $1,629,000 are proposed to support environmental stewardship actions related to low barren-ground caribou numbers and species at risk (woodland caribou and wood bison) and enhancing compliance and public education activities, improve ecological monitoring by updating the ecosystem classification for the NWT, implement new species at risk legislation and begin drafting a new Wildlife Act.

ENR will continue to develop best management practices to reduce environmental impacts from human activities by completing guidance documents relating to land-based seismic programs and camp operations.

Continue to monitor wildlife health issues such as tularemia, bovine tuberculosis and brucellosis, West Nile Virus, and avian influenza that can affect humans and wildlife.

Continue to support Traditional Knowledge studies on wildlife such as the Sahtu Renewable Resource Board's Sahtu Traditional Knowledge and Monitoring Program.

Develop generic outline for management plans for species at risk and prepare a draft management plan for leopard frog. Continue work on mountain, woodland and Peary caribou plans with co-management partners.

Continue to prepare reports on wildlife studies such as the annual report on Western NWT Biophysical Study and a new report on wildlife research permits issued.

Develop a Wood Bison Management Strategy. Address wood bison management issues by establishing committees with communities to prepare management plans for Mackenzie, Nahanni and Slave River Lowlands wood bison populations and undertake immediate actions to reduce conflicts.

Continue activities to help caribou recover by undertaking surveys to update herd estimates and prepare a draft of a new Five-Year Caribou Management Strategy 2010-2015.

Promote conservation of biodiversity by continuing to implement the NWT PAS by supporting communities to move candidate sites through the PAS process and complete a report on important wildlife areas.

Release the first State of the Environment Report on the health of the NWT's water, forests, land and wildlife and the factors driving our ever changing northern environment. The report will include a technical publication that will be web-based and can be updated annually or as new data are obtained.

Four Year Business Plan Update

Results to Date

Consultation on the second draft of environmental guidance document to reduce environmental impacts from seismic exploration activities has been completed. This document is being prepared in collaboration with Environment Canada and INAC to assist industry and regulators in preparing and reviewing applications and to promote the use of innovative practices and equipment to protect the NWT environment.

Draft Thelon Management Plan was approved by GNWT for the existing Thelon Game Sanctuary. This plan establishes co-operative management process with Nunavut and communities.

ENR supported a Sahtu Renewable Resources Board Traditional Knowledge study on caribou. One objective of this three year study is to identify traditional Dene and Métis best practices for barren-ground caribou stewardship.

Released draft map of important wildlife areas for Mackenzie Valley for review by communities. This information will be useful for environmental assessment, land use planning, protected areas planning and habitat management.

Prepared annual sport fishing and hunting brochures. These provide information on management zones, catch limits, fees and quotas for resident and non-resident hunters and anglers.

Changes to Four Year Plan

Efforts will focus on addressing wood bison management issues through the release of an NWT Wood Bison Management Strategy and development of herd specific management plans with communities. Implementing actions for the recovery of caribou herds will also continue.

New action plan for Protected Areas Strategy required after Mackenzie Valley Five Year Action Plan ends in 2009-2010.

Measures Reporting

Measures identified in the four year business plan for this key activity area.

1 – Report on state of environment
Draft report is completed.

2 – Management agreements on shared wildlife populations
Draft NWT Action Plan for boreal caribou released; draft Wood Bison Management Strategy released; Nunavut/NWT inter-jurisdictional polar bear management agreement completed; draft inter-jurisdictional boreal caribou agreement prepared.

3 – Reports on wildlife studies

2006-07 Annual Western NWT Biophysical Report completed; all barren-ground caribou calving areas delineated.

STRATEGIC INITIATIVE: MANAGING THIS LAND
Action: Protect Territorial Water

Description

Residents of the NWT value clean waters and healthy aquatic ecosystems. Communities need sufficient sources of water to satisfy current and future needs. ENR works cooperatively with other GNWT departments and water resources managers, including the federal government and land and water boards. Water use in neighbouring jurisdictions requires specific attention as the NWT is downstream within the Mackenzie River Basin (MRB).

One key obligation for water resources management in the NWT is the MRB Master Agreement, which states the ecological integrity of the MRB must be maintained. To be effective, the public and agencies must be informed about water quality, quantity and aquatic ecosystems. The MRB Board, workshops and Aboriginal water gatherings assist in keeping all parties informed.

Given the multiple perspectives and various agencies involved in water resources management, it became clear that strategic actions in water resources management are necessary to effectively ensure NWT interests are addressed. To ensure NWT waters are protected in a meaningful way, ENR, in collaboration with INAC, is leading the development of a NWT water resources management strategy. The strategy will identify sound principles, NWT interests and priorities and serve as a foundation for water resources management initiatives, such as future agreements and risk management strategies, like the Canada-wide Strategy (CWS) for Municipal Wastewater Effluent. Traditions, culture and economics help shape future actions. Public engagement to develop and implement management instruments is crucial.

Activity to Date

ENR in collaboration with Municipal and Community Affairs (MACA), Health and Social Services and Public Works and Services helped develop the *Managing Drinking Water Quality in the Northwest Territories: A Preventative Framework and Strategy*. Source water protection activities to date include basin-wide and community based watershed maps available on the internet; ongoing refinement of interactive web-map tutorial; ongoing addition of 'layers' of relevance to water management through NWT Spatial Data Warehouse; printable web-published maps of watersheds (regional) and community source waters.

The GNWT must ensure treatment of Municipal Wastewater Effluent (MWWE) in NWT communities is at an acceptable level in comparison to requirements in other jurisdictions and that communities are equipped to meet all regulatory requirements. The Canada-wide Strategy for Management of MWWE calls for northern jurisdictions and the federal government to work collaboratively to complete research to, among other things, develop performance standards for water treatment facilities for Canada's Far North. A Northern Research Working Group (NRWG), co-lead by INAC and Environment Canada, was formed to ensure northern factors, including the performance of wetlands as a viable treatment option, were duly considered within a five-year research window.

ENR supports an "ecosystem-based approach" to managing MRB waters by participating on the MRB Board. Board funding limits the collaborative initiatives that should be occurring in the Basin given the rapid pace of development. MRB Ministers met in July 2008 to discuss financial needs, future priorities,

and roles of the Board. Ministers requested that the Board submit a detailed business plan with options in January 2009.

Currently, assisted by communications through the MRB, ENR tracks major development projects within the upper MRB to ensure appropriate courses of action, including intervention, may be taken. However, such management actions are strengthened through transboundary water resources agreements.

In collaboration with INAC, ENR undertook work to prepare itself for negotiations with Alberta on a bilateral water management agreement. An Alberta-NWT Bilateral Memorandum of Understanding (MOU), signed by ENR, INAC and Alberta Environment in 2007 guides negotiation of the agreement.

ENR collaborated with INAC to develop and release the discussion paper "Northern Voices, Northern Waters – Towards a Water Resources Management Strategy for the Northwest Territories", which outlined possible guiding principles, water needs, and elements of a proposed water strategy. In summer 2008, Aboriginal governments were invited to participate in an Aboriginal Steering Committee as partners to develop the strategy. Committee meetings are set to begin in fall 2008. Communities and other interested persons are also helping shape a strategy that guides future water resources management actions.

Planned Activities - 2009/10

Finalize a NWT Water Resources Management Strategy suitable for now and future years. It is anticipated the strategy will be values-based, founded on guiding principles and include risk-based management approaches that acknowledge the supply and demand of water resources and requirements for aquatic ecosystem health. Aboriginal governments, stakeholders and the public will be invited to provide input into the development of the strategy.

Research current approaches towards the development of aquatic ecosystem indicators, especially regarding valued aquatic ecosystem components. Traditional knowledge will inform the research. Develop aquatic ecosystem indicators based on research and validation through NWT public engagement. Develop an action plan and begin to implement a NWT Water Resources Management Strategy.

Continue participation in the national coordination committee and Northern Research Working Group for CWS for MWWE and initiate implementation discussions.

In partnership with INAC, lead the development of the 2009 MRB State of the Aquatic Ecosystem Report (SOAER), for release in 2010. The MRBB has funded the development of a hydrological flow model for the MRB. As well, member jurisdictions (not the GNWT) and other agencies conduct research; monitor water flows, quality and use; and, regulate water use and development pressures. ENR contributes to discussions on research agendas.

Advance negotiations towards transboundary water resources agreement(s) for watersheds shared with Alberta and other member jurisdictions. Agreement negotiations are expected to begin in fall 2009 and last for two years. It is anticipated that a negotiations phase would culminate in a signed agreement in 2010. First Nations will be engaged during each phase.

Planned Activities – 2010/11 and 2011/12

2010-11

Finalize management tools to assist water managers, including communities, in effectively protecting community public water supply zones effectively. Actions to support this objective include regional visits to familiarize communities with public water supply watershed mapping and receive input into regional risks and concerns.

Undertake GNWT actions to implement a NWT Water Resources Management Strategy; finalize negotiations and undertake approval process for transboundary waters agreement(s) with Alberta; initiate discussions towards other transboundary waters agreements for other watersheds (Saskatchewan, British Columbia); and continue to implement Yukon-NWT bilateral agreement.

Ongoing participation in Mackenzie River Basin management processes, including releasing the 2009 State of the Aquatic Ecosystem report.

Advance water resources risk analysis, especially with respect to values under the purview of the GNWT (public water supply sources and traditional economy); develop viable aquatic ecosystem indicators, especially with respect to identified values.

Develop implementation plan and proceed as appropriate for the CWS for MWWE.

2011-12

Continue to implement NWT Water Strategy based on priorities and GNWT public interests identified. Initiate discussions towards other transboundary waters agreements (Saskatchewan, British Columbia); continue to implement Yukon-NWT bilateral.

Ongoing participation in Mackenzie River Basin management processes.

Proceed as appropriate for implementation of the CWS for MWWE.

Develop effective management tools and pilot projects for NWT communities to manage risks to community public water supply sources.

STRATEGIC INITIATIVE: MANAGING THIS LAND
Action: Mitigate & Adapt to Climate Change Impacts

Description

This strategic action focuses on enhancing the GNWT's efforts on climate change through: improved planning and coordination; continued delivery of the Greenhouse Gas Strategy and Energy Plan; and specific activities to adapt to impacts of climate change. Action will be taken to reduce greenhouse gas emissions, track emissions and energy performance and to investigate and support alternative energy technologies. ENR and partners on the NWT Wind Energy Committee will undertake the development of a detailed business case and community consultations for two wind energy electricity supply pilot installations in the NWT, conduct geotechnical/engineering studies for the initial installations and install wind turbines. ENR will promote the use of alternative energy sources in the NWT and will prepare and implement a NWT Climate Change Adaptation Plan. The Plan will establish mechanisms to provide information and support to decision makers at all levels to incorporate climate change considerations into their activities.

Activity to Date

In 2007, ENR surveyed GNWT departments and prepared a report on the effects of climate change impacts on their activities and the steps being taken to adapt to those impacts. The survey identified a number of critical needs for information and coordination to assist departments to incorporate climate change considerations into decision making, especially regarding new and existing infrastructure. ENR is now preparing a NWT Climate Change Adaptation Plan to address these issues and also assist non-GNWT interests adapt to climate change impacts.

ENR had preliminary discussions with Environment Canada about working together to develop regional climate change scenarios for the NWT. Federal funding, through INAC, has enabled ENR to address adaptation planning initiatives in the current fiscal year and to develop in-house expertise to leverage further federal funding and expertise in subsequent years.

Planned Activities - 2009/10

Implement the NWT Climate Change Adaptation Plan including: development of initial regional climate change scenarios in association with Environment Canada; issuing contracts to conduct geophysical permafrost surveys; and work with other GNWT departments, communities and regional governments that are addressing adaptation problems.

Implement and provide advice and support for other departments to implement actions identified in the Greenhouse Gas Strategy.

Establish a Climate Change Network to provide necessary communication and coordination support to organizations involved in greenhouse gas mitigation and climate change adaptation.

Prepare and start to implement a Biomass Strategy that identifies actions, programs and projects necessary to establish a sustainable biomass energy market and supply chain in the NWT.

Finalize business models and business agreements and undertake geotechnical / engineering studies for the installation of wind energy electrical supply in Tuktoyaktuk.

Inventory GNWT greenhouse gas emissions; support other parties in the NWT in preparation of their greenhouse gas emission inventories; and prepare annual inventories of total NWT emissions for reporting to The Climate Registry.

Provide funding and technical support to projects that demonstrate use of alternative energy technologies (e.g. solar hot water heating, photovoltaic panels, wood pellet heating) and develop GNWT and community knowledge and capacity.

Planned Activities – 2010/11 and 2011/12

Continue to refine climate scenarios; interpret permafrost mapping information; identify permafrost vulnerabilities arising from future climate warming, conduct risk assessments; and, support affected departments, communities and regional governments to adapt to climate change.

Continue to implement and provide advice and support for other departments to implement actions identified in the Greenhouse Gas Strategy.

Continue to implement the Biomass Strategy through programs and projects that increase use of biomass for heat and energy and support regional supply of biomass.

Complete installation of wind turbines in Tuktoyaktuk, assess the project and develop business plans and geotechnical / engineering studies for additional wind turbine installations.

Inventory GNWT greenhouse gas emissions; support other parties in the NWT in preparation of their greenhouse gas emission inventories; and, prepare annual inventories of total NWT emissions for reporting to The Climate Registry.

Provide funding and technical support to projects that demonstrate use of alternative energy technologies (eg. solar hot water heating, photovoltaic panels, wood pellet heating) and develop GNWT and community knowledge and capacity.

STRATEGIC INITIATIVE: MANAGING THIS LAND
Action: Improve Environmental Monitoring Efforts

Description

To effectively manage the land and work with partners on environmental issues, it is important appropriate information is collected and shared to support informed decisions. This action will advance the availability of environmental information and associated monitoring and reporting systems.

Ecoregion mapping provides a current picture of the land, which can be used to assess potential environmental impacts of development and monitor impacts from climate change. The approach to mapping the eco-regions of the NWT is forward-looking and provides a basic reference point for detecting vegetation and landscape changes, environmental assessment and resource management.

The Western NWT Biophysical Study was established in 2003 to help ensure baseline data necessary to assess, mitigate and monitor the environmental impacts of proposed developments in the Western NWT is available to industry, regulators, communities and governments. The program focuses on areas within the mandate of ENR- wildlife, wildlife habitat, forests and air quality. Partnership funds provide half of the resources used for the research projects.

Activity to Date

Ecoregion mapping (Complete ecoregion classification for Taiga Shield and Cordilleran Ecozones in 2008-09 and, in future years, for Southern and Northern Arctic Ecozones). Taiga Shield technical report and layman poster completed and published. Technical analysis of Cordilleran Ecozone completed.

Western NWT Biophysical Study (Complete the collection and compilation of baseline information for wildlife, wildlife habitats, forests and air quality to support resource management decisions in the Western NWT)) – 2006-07 annual report published that describes activities undertaken to improve baseline information on boreal caribou, air quality, forests , and grizzly bear movements in the Delta.

Planned Activities - 2009/10

Ecoregion mapping

- Publish Boreal and Taiga Cordillera report and layperson poster
- Conduct fieldwork for the Southern Arctic (aerial surveys, collection of used fuel drums and field accommodation)
- Workshops and contracts to complete analysis of the Southern Arctic

Western NWT Biophysical Study

- Continue boreal caribou studies to monitor movements and productivity in Inuvik, Sahtu, Dehcho and South Slave regions
- Continue monitoring grizzly bear movements and productivity in relation to industrial activity in Inuvik region
- Hold biennial Dehcho regional wildlife workshop
- Monitor air quality

- Continue cumulative effects modeling for boreal caribou
- Continue forest habitat classification

Planned Activities – 2010/11 and 2011/12

Ecoregion mapping

- Complete fieldwork, analysis, technical report and layperson poster for Southern Arctic and Northern Arctic ecozones

Western NWT Biophysical Study

- Continue boreal caribou studies to monitor movements and productivity in Inuvik, Sahtu, Dehcho and South Slave regions
- Continue monitoring grizzly bear movements and productivity in relation to industrial activity in Inuvik region
- Monitor air quality
- Continue forest habitat classification

STRATEGIC INITIATIVE: MANAGING THIS LAND
Action: Environmental Stewardship

Description

The careful and responsible management of our natural resources and the environment is of critical importance to the people of the Northwest Territories. This strategic action will advance legislation, policies, plans and programs to support the stewardship and sustainable use of the environment and its natural resources. Wildlife populations and habitat will be monitored, the Caribou Management Strategy (2006-2010) will be fully implemented and a new strategy prepared for 2011-2015. A Wood Bison Management Strategy and herd management plans will be prepared. The waste reduction and recovery program will expand to reduce our impact on the environment. New wildlife and species at risk legislation will be put in place for the protection and management of wildlife. A new NWT PAS Mackenzie Valley Five-Year Action Plan will be prepared. A field support unit will be established for regional activities related to preparing public education information, compliance, maintaining central databases on licensing and permitting and to provide logistical support. Reducing the risk to communities from wildland fire is being accomplished through advanced planning and adoption of FireSmart principles. The potential for communities to be threatened by wildfire will be assessed and risk management strategies to mitigate risk identified in community protection plans.

Activity to Date

A variety of mechanisms supporting sustainability planning for regional forest landscapes have been assessed. Many planning tools exist in assessing sustainability from timber growth indices and related sustainability reports, to forest and land management plans.

Research is being supported to assess the links between land clearing, seismic exploration, forest harvesting and the effects on forest landscapes, and the wildlife it supports.

The GNWT has worked with INAC and Environment Canada to develop guidelines to assist in managing environmental impacts caused by oil and gas exploration activities.

ENR is implementing an updated approach to wildland fire protection planning based upon FireSmart principles. The FireSmart approach includes three levels of planning (the community, the interface, and the landscape level) through which the threat from wildfire is assessed and risk mitigation opportunities identified. A pilot project to refine the planning approach is in the process of being completed in Fort Smith. This pilot will result in a planning model for developing similar plans for other communities.

A draft NWT Action Plan for boreal caribou and a draft NWT Wood Bison Management Strategy were released. The inter-jurisdictional management agreement on polar bears with Nunavut was completed. Year 4 of the Five-Year NWT Barren-ground Caribou Management Strategy, which contains numerous monitoring actions, was implemented and development of management plans for the Bluenose-East, Bluenose-West and Ahiak herds with Nunavut were initiated. An independent review of caribou studies was completed. A cumulative effects model for barren-ground caribou was developed. A Landscape Accumulative Effects Simulator (ALCES) model to assist in developing woodland caribou range plans was completed. Satellite based vegetation mapping in the Dehcho Region and related habitat with woodland caribou movement was completed and an initial draft of Alberta/NWT woodland caribou management agreement was completed.

Public review of the draft legislation for species at risk was completed and a draft bill was introduced into the legislature. A schedule was set up for the Working Group to prepare the new Wildlife Act.

A first protected area was established (Sahoyue-?ehdacho – Grizzly Bear Mountain and Scented Grass Hills). Approximately 20 areas are moving through process to establish protected areas, potential representative areas identified for Mackenzie Valley.

Steps initiated to establish a Field Support Unit from existing resources and staff – new organizational chart to be drafted.

Review of the GNWT's Traditional Knowledge (TK) Policy was completed and a draft TK Policy Implementation Framework was developed.

Conducted a public information campaign and consulted with the public, Aboriginal governments, environmental organizations and government on expansion of the Waste Reduction and Recovery Program. The discussion included proposed products such as electronics, tires, lead acid batteries, fuel drums, single use plastic retail bags, milk containers and paper and cardboard. In general, people were eager to see the GNWT take action to expand the program. Paper and cardboard products emerged as the number one items for new recycling programs. Electronics, milk containers, and lead acid batteries followed; all with similar scores. ENR has initiated steps to begin a public awareness and education campaign to reduce the use of both single use retail plastic and paper bags, which includes the distribution of free reusable bags to NWT households.

Planned Activities - 2009/10

Develop and consider appropriate mechanisms for evaluating land use impacts against ecological sustainability assets and values, specifically related to cumulative effects impacts around boreal caribou habitats.

Forest Management Plans are being evaluated and integrated (Dehcho, Gwich'in, Thelon).

A research program with wildlife researchers at the University of Alberta (i.e. Environmental Studies Research Funds) is continuing. ENR is pursuing internal research into effects of land clearing and how best to guide land use disturbances to minimize effects on a landscape basis.

Seismic guidelines will be used by the environmental managers and assessed and monitored. A full review and update is scheduled for 2010-2011.

The ALCES or other landscape level modeling will be done and will improve our ability to predict landscape supply for given development scenarios.

The proposed *Risk Management Strategies and Community Protection Plan* activities will use Strategic Initiative monies to develop proactive wildland fire community protection plans in the NWT. These plans will identify and prescribe sound risk mitigation strategies that will foster improved public safety and complement the current NWT Forest Fire Management Policy. Using the results from the NWT Community Wildland Fire Threat Rating analysis, three at risk communities will be strategically targeted for the first year.

Wildlife Management Strategies, Plans and Agreements
Obtain new population estimates for barren-ground caribou herds and complete drafts of herd management plans (Bluenose-West, Bluenose-East and Ahiak).

Prepare second five-year barren-ground caribou management strategy 2010-2015 and complete NWT/BC/Yukon management plan for woodland mountain caribou.

Complete wood bison management plans and implement actions to address bison/human conflicts in communities and implement NWT Action Plan for boreal caribou.

Continue to evaluate cost effective approaches to assess land cover changes on forest resources and wildlife habitat for barren-ground caribou, wood bison and woodland caribou.

NWT *Species at Risk Act* and Wildlife Act
Begin implementation of the new *Species at Risk Act*. Continue drafting new Wildlife Act with Working Group.

Waste Reduction and Recovery Program
Initiate the implementation of a Paper Products Diversion Initiative. Funding from the Environment Fund (up to $100,000 each year) will be used to encourage businesses, non-profit groups and municipalities to divert paper products from NWT landfills through innovative projects and/or research and development. Preferences will be given to partnerships between municipalities and businesses or municipalities and non-profit groups. The goals of this initiative are to divert paper products from NWT landfills, create local markets for waste paper products and create local job opportunities. ENR will also encourage all GNWT offices to recycle paper products. This service is already available in some larger communities.

Conduct stakeholder and public consultations on amending the Beverage Container Regulations to add milk containers to the current deposit-refund Beverage Container Program. Initiate the implementation of this program during 2009/10.

Design a program and draft necessary regulations for implementing fees on single use retail plastic and paper bags. The purpose of the fee will be to significantly reduce and eventually eliminate the use of these items in the NWT. The fee collected would not be reimbursed and no NWT-wide recycling program would be implemented. ENR will consult with the public/stakeholders on the regulations and implement a legislated program in 2009/10.

NWT Protected Areas Strategy
Develop a new action plan with partners to complete establishment of existing candidate sites by 2013, identify candidate sites for GNWT sponsorship and release important wildlife areas publication for the Mackenzie Valley.

New Field Support Unit
Establish unit and prepare public education material on stewardship roles for industry, enhance patrols and begin development of hunter education program to enhance stewardship ethic.

Traditional Knowledge
Work with the inter-departmental TK Working Group to enhance accountability for TK Policy implementation within the GNWT generally. Work towards establishing formal TK process, sharing and usage protocols with regional Aboriginal governments and agencies. Identify, encourage and support cultural, language and TK awareness and mentoring opportunities for ENR employees.

Planned Activities – 2010/11 and 2011/12

Risk Management Strategies
Continue with the Risk Management Strategies and Community Protection Plan strategic initiative. An additional four community plans will be completed annually in 2010-2011 and 2011-2012.

Wildlife management strategies, plans and agreements
Complete Inter-jurisdictional Caribou Management Agreement with Nunavut; complete Polar Bear Management Strategy for Canada; develop regional range management plans for boreal caribou; implement new NWT Barren-ground Caribou Management Strategy 2010-2015; and, address cumulative impacts assessment for species at risk.

Wildlife Act
Complete drafting and release draft Wildlife Act for public review.

Waste Reduction and Recovery Program
Continue with Paper Products Diversion Initiative for 2010/11 and 2011/12.

Assess the effectiveness of fees on single use retail bags program and establish further legislation, as required, to eliminate their use in the NWT.

Initiate consultation on, and design of, an electronic waste (e-waste) recycling program in 2010/11. Undertake a study to determine the viability of such a program in the NWT and to determine the appropriate type of program for the Territory. Finalize program design and draft regulations in 2011/12. Implement an e-waste program based on consultation, feasibility and design studies in 2012/13.

NWT Protected Areas Strategy
Evaluate application of critical wildlife areas to protect areas and complete the identification of important wildlife areas for NWT.

Field Support Unit
Prepare public education material on stewardship roles for industry, enhance patrols and begin development of hunter education program to enhance stewardship ethic.

Traditional Knowledge
Identify resources to support community driven TK initiatives of mutual interest to the department to and community/regional governments or cultural agencies. Engage in collaborative research and planning initiatives with regional management and/or cultural agencies.

STRATEGIC INITIATIVE: MAXIMIZING OPPORTUNITIES

Action: Maximize Benefits from Resource Development

Description

Work will be required from all GNWT departments to support development of the Mackenzie Gas Project (MGP) pending its approval. The GNWT supports development that proceeds at a pace and manner that respects the environment and ensures benefits accrue to NWT residents. This development has the potential to be the single most significant economic development opportunity in the history of the NWT.

ENR will ensure that technical expertise is available to effectively handle the workload associated with the MGP regulatory review and approval processes. The Oil and Gas Regulatory Officer will help to ensure a timely and thorough review of the pipeline applications; support mitigation and remediation activities; address public concerns over potential environmental impacts from pipeline and natural gas development; and, reduce the GNWT's post-devolution environmental liabilities.

The MGP will cause the single largest act of land clearing in the history of the NWT with an expected area to total upwards of 14,000 hectares. The Environmental Impact Analyst position in the Forest Management Program will coordinate the many inter-related aspects of this activity with the developer and the many regulators and stakeholders.

Activity to Date

ENR has hired and trained a Pipeline Environmental Officer who has become familiar with regulatory requirements, environmental issues, oil and gas exploration and development methods, construction methods, best environmental management practices, NWT community concerns and adaptive management approaches. The Officer has been providing technical advice on the potential for environmental impacts and mitigation of impacts from oil and gas activity in the NWT.

Planned Activities - 2009/10

Establish an Oil and Gas Regulatory Officer position to ensure work currently being conducted by the Pipeline Environmental Officer can continue into the regulatory stage of the project. This proposal is an extension of an existing approved program. This position will help to facilitate a more thorough review of the pipeline applications, support mitigation and remediation activities, address public concerns over potential environmental impacts from pipeline and natural gas development and reduce the GNWT's post-devolution environmental liabilities.

Planned Activities – 2010/11 and 2011/12

Review of pipeline regulatory applications will continue through pipeline construction. Effective management of environmental impacts will require an adaptive management approach where mitigation and remediation activities are regularly assessed for effectiveness and modified, where necessary.

STRATEGIC INITIATIVE: REDUCING THE COST OF LIVING

Action: Address Factors that Impact the Cost of Goods

Description

This strategic action focuses on efforts to reduce the consumption of costly energy sources through programs identified in the NWT Greenhouse Gas Strategy and the Energy Plan including EnerGuide for Houses, Energy Efficiency Incentive Program, Energy Information and Awareness and the Arctic Energy Alliance.

Activity to Date

ENR has implemented three programs to assist NWT residents, businesses and communities to reduce consumption of costly energy sources. The Energy Efficiency Incentive Program (EEIP) was designed to assist homeowners and consumers in the purchase of new, more efficient models of products that they use every day. The Alternative Energy Technologies Program (AETP) promotes alternative energy technologies, both new and proven, which reduce energy costs and greenhouse gases for communities, businesses and homeowners. The Energy Conservation Program (ECP) assists community and aboriginal funded departments, boards and agencies, and non-profit organizations achieve energy efficiency improvements. The three energy programs were updated in 2008 to reflect the priorities of the 16th Legislative Assembly and to respond to increases in the cost of fossil fuels.

Planned Activities - 2009/10

Enhance the EEIP to provide rebates to residents of the NWT who purchase energy efficient equipment and grants to homeowners who complete energy efficiency upgrades to their homes.

Enhance support for the Arctic Energy Alliance to allow the Alliance to continue increasing activity in smaller communities and provide more equal access to NWT residents living outside of Yellowknife.

Conduct public information and education programs to ensure NWT residents are aware of the opportunities and approaches available to reduce energy consumption and greenhouse gas emissions. Efforts in public information and education, marketing campaigns and technical energy information on emerging technologies will be enhanced for communities and residents.

Planned Activities – 2010/11 and 2011/12

Continue to provide support for Arctic Energy Alliance activities and programs.

Support for NWT residents, businesses and communities' actions to increase energy conservation and energy efficiency will continue and be enhanced as necessary to address demand for these programs.

Public information and education programs will build on the success of NWT residents, businesses and communities in increasing energy efficiency and conservation and reducing greenhouse gas emissions. Examples will be used to encourage action across the NWT.

INFRASTRUCTURE INVESTMENTS

Activity to Date

Three focus areas are being addressed by capital activities in 2008-2009; information technology projects; regional facility development supporting departmental operations; infrastructure to limit environmental liability; and, infrastructure to support the forest fire management program.

2008 -2009 project activities and progress are:

Project	Category	Community	Progress
Forest Management Information System FMIS/EMBER Modules	Information	Territorial	On schedule
Shell Lake Bunkhouse Refit	Regional Facility	Inuvik	On schedule
Warehouse – Office	Regional Facility	Paulatuk	On schedule
Check Station Canol Road	Regional Facility	Mile 222 – Canol	On Schedule
Trout Lake Attack Base	Fire Management	Trout Lake	On schedule
Fort Liard Lookout Tower	Fire Management	Fort Liard	On Schedule
Lightning Location Systems	Fire Management	Territorial	Acquisition Phase
Drummed Fuel Storage Containment	Environmental Liability	Fort Smith	On schedule
Drummed Fuel Storage Containment	Environmental Liability	Fort Simpson	On schedule
Licensing Information System (LISIN) Phase I	Information	Territorial	Completed
Environmental Assessment Tracking System (EATS)	Information	Territorial	On schedule

In addition, ENR will be undertaking a project on assessment of infrastructure pool and planning for future demands and enhancements.

Planned Activities - 2009/10

Project	Category	Community	Status
Lightning Location System	Fire Management	Territorial	Continuing project
Check Station - Canol Road		Norman Wells	Continuing
Schiltee Lookout Tower - Upgrades	Fire Management	Fort McPherson	New Project
Shell Lake - Storage Building	Regional Facility	Inuvik	New Project
River Compound- Office/Warehouse	Regional Facility	Inuvik	New Project
Office/Warehouse - Upgrades	Regional Facility	Sachs Harbour	New Project
LISIN Phase II	Information	Territorial	New Phase
Compliance Management Information System	Information	Territorial	New Project
Patrol Boat	Wildlife	Fort Good Hope	New
Forest Fire Response Base	Fire Management	Trout Lake	Continuing

Additionally, ENR will complete the assessment of the infrastructure inventory and a planning framework for future iterations of the Department's infrastructure plan.

Planned Activities – 2010/11 and 2011/12

ENR intends to conduct an assessment and develop a strategic plan for all infrastructure assets currently held by the Department. This plan will form the basis of the future capital planning process for the Department; address the categories of regional facilities, information technology, environmental liability mitigation; and, support to the forest fire management program.

The plan will consider

- Regional Operations Complexes
- Environmental Liability Risk Mitigation
- Forest fire management infrastructure, which would include lookout towers and the Department's communication network supporting field operations

LISIN Phase III to focus on improved access to residents and agents involved in the issuance of permits and licensing.

Implement the Compliance Management Information System.

LEGISLATIVE INITIATIVES

Activity to Date

The Department of Environment and Natural Resources (ENR) has initiated the development of new comprehensive legislation to support sustainable forest management and an approach to fire management consistent with the NWT Forest Fire Management Policy.

The existing *Forest Protection Act* and *Forest Management Act* do not provide the tools necessary to manage forest resources consistent with federal commitments to sustainable forestry, the NWT Sustainable Development Policy and forest management principles in use today. None of the legislation adequately addresses consultation with Aboriginal governments.

The proposed legislation and new Forest Management Policy will cover the management of forest vegetation, regulatory requirements for the sustainable use of forest resources and the protection of people, property, and values at risk from wildland fire in the NWT.

A framework and action plan was initiated for creating the new forest legislation and policy. This includes the identification of consultation approaches.

The public review of the draft Species at Risk Act has been completed. The draft Bill has been introduced in the Legislative Assembly.

A schedule was set up for the Working Group to prepare new Wildlife Act.

Planned Activities - 2009/10

During fiscal year 2009-2010, ENR will begin implementation of the action plan for a new forest resource management policy and comprehensive forest and fire management legislation.

Implement the new Species at Risk Act.

Draft the new Wildlife Act with Working Group.

Planned Activities – 2010/11 and 2011/12

Draft comprehensive forest management legislation and forest management policy, using approaches that include consultation with stakeholders and consideration of northern issues. The draft is targeted to be complete for discussion and approval of the 16th Assembly.

Complete the drafting of the Wildlife Act and release it for public review.

HUMAN RESOURCE OVERVIEW

Overall Human Resource Statistics

All Employees

	2008	%	2007	%	2006	%
Total	252	100	253	100	241	100
Indigenous Employees	169	67	168	66	159	66
Aboriginal	132	52	133	52	125	52
Non-Aboriginal	37	15	35	14	34	14
Non-Indigenous Employees	83	33	85	34	82	34

Note: Information as of March 31 each year.

Senior Management Employees

	2008	%	2007	%	2006	%
Total	12	100	12	100	12	100
Indigenous Employees	6	50	5	42	4	33
Aboriginal	3	25	3	25	3	25
Non-Aboriginal	3	25	2	17	1	8
Non-Indigenous Employees	6	50	7	58	8	67
Male	9	75	9	75	9	75
Female	3	25	3	25	3	25

Note: Information as of March 31 each year.

Non-Traditional Occupations

	2008	%	2007	%	2006	%
Total	135	100	140	100	152	100
Female	18	13	20	14	23	15
Male	117	87	120	86	129	85

Note: Information as of March 31 each year.

Employees with Disabilities

	2008	%	2007	%	2006	%
Total	1	100	1	100	1	100
Employees with disabilities	1	0.4	1	0.4	1	0.4

Note: Information as of March 31 each year.

Position Reconciliation

This information differs from the employee information on the preceding page. Employee information reflects actual employees on March 31 of each year, and the information presented below reflects position expenditures approved through the budget process for each fiscal year.

Active Positions

Summary:

	2008-09 Main Estimates	Change	2009-10 Business Plan
Total	287	4	291
Indeterminate full-time	186	3	189
Indeterminate part-time	6	4	10
Seasonal	95	(3)	92

Adjustments approved through Business Planning Process:

Position	Community	Region	Added	Explanation
NEW – Climate Change Specialist	Yellowknife	HQ	added - FT	2009/10 Forced Growth
NEW – Climate Change Specialist	Yellowknife	HQ	added - FT	2009/10 Forced Growth
NEW – Manager, SARA Secretariat	Yellowknife	HQ	added - FT	2009/10 Forced Growth
NEW – Coordinator, SARA Secretariat	Yellowknife	HQ	added - PT	2009/10 Forced Growth
NEW – Wildlife Legislation Specialist	Yellowknife	HQ	added - FT	2009/10 Forced Growth
Total Approved			**5**	

Adjustments approved through Target Reduction:

Position	Community	Region	Deleted	Explanation
396 – Sr. Advisor/Resource Dev.	Yellowknife	HQ	deleted- FT	09/10 Target Reduction
10709 – Wildlife Biologist-Climate Chge	Yellowknife	HQ	deleted- FT	09/10 Target Reduction
6443 – Wildlife Technician III	Yellowknife	HQ	deleted- FT	09/10 Target Reduction
9001 – Air Attack Officer	Yellowknife	HQ	deleted- Seas	09/10 Target Reduction
9268 – Wildland Fire Crew Leader	Inuvik	Inuvik	deleted- Seas	09/10 Target Reduction
9279 – Forest Fire Mgmt Clerk	Ft. McPherson	Inuvik	deleted- Seas	09/10 Target Reduction
Total Reductions			**(6)**	

Adjustments through interdepartmental transfers:

Position	Community	Region	Added	Explanation
10859 – Director Informatics	Yellowknife	HQ	added - FT	Moved from ITI
10485 – Database & System	Yellowknife	HQ	added - FT	Moved from ITI
6805 – Information Business Analyst	Yellowknife	HQ	added - FT	Moved from ITI

5240 – Database Admin/Analyst	Yellowknife	HQ	added - FT	Moved from ITI
6043 – Manager, Remote Sensing	Yellowknife	HQ	added - FT	Moved from ITI
6718 – Geomatics App Sys Specialist	Yellowknife	HQ	added - FT	Moved from ITI
7451 – Remote Sensing Analyst	Yellowknife	HQ	added - FT	Moved from ITI
741 – GIS Specialist	Yellowknife	HQ	added - FT	Moved from ITI
3184 – Geomatics Officer	Yellowknife	HQ	added - FT	Moved from ITI
469 – Mgr. Library Services	Yellowknife	HQ	added - FT	Moved from ITI
10292 – Records Coordinator	Yellowknife	HQ	added - FT	Moved from ITI
11649 – Internet/Intranet Specialist	Yellowknife	HQ	added - FT	Moved from ITI
11333 – Spatial Data Warehouse Admin.	Yellowknife	HQ	added - FT	Moved from ITI
Total interdepartmental Transfers			**13**	

Other Adjustments

Position	Community	Region	Added/ Deleted	Explanation
1787 – Enforce. & Compliance Specialist	Ft. Smith	Ft. Smith	deleted- FT	Reprofiled to 12941
12941 – GIS Tech	Ft. Smith	Ft. Smith	added - FT	Reprofiled from 1787
1120 – Renewable Resource Officer II	Deline	Sahtu	deleted - FT	Reprofiled to 13087
13087 – Renewable Resource Officer I	Deline	Sahtu	added - FT	Reprofiled from 1120
11434 – Telecom & Data System Tech	Ft. Smith	Ft. Smith	added – FT	Internal reallocation
9037 – Administration Officer	Ft. Smith	Ft. Smith	added - FT	Internal reallocation
12979 – Fire Technician	Ft. Simpson	Dehcho	added – Seas	Internal reallocation
12911 – Intern- Climate Change	Yellowknife	HQ	deleted - FT	Term completed
12650 – Intern – Protected Areas	Yellowknife	HQ	deleted- FT	Term completed
12892 – Intern – Wildlife Biologist	Ft. Smith	Ft. Smith	deleted - FT	Term completed
702 – Renewable Resource Officer II	Hay River	Ft. Smith	deleted – FT	Inactive position
11080 – Assis. Seas. Warehouse Person	Yellowknife	N. Slave	deleted- Seas	Inactive position
10344 – Biologists & Related Scientists	Norman Wells	Sahtu	deleted- FT	Inactive position
12763 – Renewable Resource Officer I	Sachs Harbour	Inuvik	added – PT	Reinstated
12762 – Renewable Resource Officer I	Paulatuk	Inuvik	added - PT	Reinstated
199 – Coordinator, PAS	Yellowknife	HQ	deleted- FT	From FT to PT
199 – Coordinator, PAS	Yellowknife	HQ	added- PT	PT from FT
11425 – Solid Waste Specialist*	Yellowknife	HQ	deleted - FT	Moved- Other Positions
12107 – Environ. Assmt Specialist*	Yellowknife	HQ	deleted - FT	Moved-Other Positions
12106 – Project Engineer-Giant Mine *	Yellowknife	HQ	deleted - FT	Moved-Other Positions
12684 – Regional Coordinator PAS*	Norman Wells	Sahtu	deleted- FT	Moved-Other Positions
6273 – Manager, Wildlife Management*	Inuvik	Inuvik	deleted- FT	Moved-Other Positions
7081 – Senior Regional Biologist *	Inuvik	Inuvik	deleted- FT	Moved-Other Positions
10569 – Geospatial Analyst*	Inuvik	Inuvik	deleted- FT	Moved-Other Positions
Total Adjustments			**24**	

*Vote 4 Positions

Other Positions (Vote 4/5)

Summary: Vote 4 positions (GNWT undertakes to perform certain functions on behalf of the Government of Canada or Others) that work for ENR but are funded by others.

	2008-09 Main Estimates	Change	2009-10 Business Plan
Total	0	8	8
Indeterminate full-time	0	8	8
Indeterminate part-time	0	0	0
Seasonal	0	0	0

Adjustments During the Year:

Position (All Vote 4)	Community	Region	Added	Explanation
11425 – Solid Waste Specialist	Yellowknife	HQ	added - FT	Moved from Active Position
12107 – Environ. Assmt Specialist	Yellowknife	HQ	added – FT	Moved from Active Position
12106 – Proj. Engineer-Giant Mine	Yellowknife	HQ	added – FT	Moved from Active Position
12684 – Coordinator – PAS	Norman Wells	Sahtu	added – FT	Moved from Active Position
6273 – Manager, Wildlife Mgmt	Inuvik	Inuvik	added – FT	Moved from Active Position
7081 – Sr Regional Biologist	Inuvik	Inuvik	added – FT	Moved from Active Position
10569 – Geospatial Analyst	Inuvik	Inuvik	added – FT	Moved from Active Position
13094 – GIS Specialist	Yellowknife	N. Slave	added – FT	NEW
Total Vote 4		**8**		

Other Human Resource Information

One of the stated priorities of the Legislative Assembly is to "improve human resource management within the GNWT through training, career planning, and encouraging innovation by employees." To address this priority, the Department of Human Resources is leading the development of a Corporate Human Resource Strategy for the Northwest Territories Public Service. The completion of this overall strategy will provide a framework for the development of departmental human resource plans and initiatives, including the development of succession plans and affirmative action plans. This work will be undertaken during the 2009-2010 fiscal year and will ensure a consistent and coordinated approach across government, providing equitable opportunities for all staff.

Human Resource Activities

	2008	%
Total Students	24	100
Indigenous Employees	21	88
Aboriginal	10	42
Non-Aboriginal	11	46
Non-Indigenous Employees	3	12
Total Interns	1	100
Indigenous Employees	1	100
Aboriginal	1	100
Non-Aboriginal	0	0
Non-Indigenous Employees	0	0
Total Employees on Transfer Assignments	7	100
Indigenous Employees	6	86
Aboriginal	4	57
Non-Aboriginal	2	29
Non-Indigenous Employees	1	14

Note: Information as of September 30, 2008.

Activities Associated with Staff Training & Development

Recruitment and Retention

ENR continues to experience difficulty recruiting candidates for its Renewable Resource Officer (RRO) positions. The Department will be developing a plan to work with community members interested in acquiring skills for becoming an entry level RRO I.

The Department supports on-going professional development of staff. This includes support for participation in professional conferences, courses, training workshops and college courses.

Succession Planning

In order to carry out effective governance and actions to manage the environment and natural resources, it is important the GNWT have a strong public service. With 45 percent of ENRs total workforce and 83 percent of ENRs senior managers eligible for retirement within the next decade, succession planning will ensure gaps in the workforce are minimized.

As at September 30, 2008, seven employees were participating in transfer assignments to develop skills and broaden their experience. Of those seven, two have completed their training and have since been direct appointed into their positions.

In 2008-09, ENR is sponsoring two employees in the Emerging Managers program and another two in the Middle Managers program.

INFORMATION SYSTEMS & MANAGEMENT OVERVIEW

Overview

Through the establishment of the Shared Service Centre, the Departments of Environment and Natural Resources and Industry, Tourism and Investment share Information System development and management resources. The Informatics Division provides information management and information services to both departments under an interdepartmental agreement. This approach allows for increased synergies between departmental systems and a strong desire to share and collaborate on technology initiatives. To date, this approach has been very successful and has resulted in multidepartment systems platforms such as the LISIN (Licensing Information System) and the Environmental Assessment and Tracking System, both of which are moving into production during the 2008/09 fiscal year.

A new Information Systems and Management Strategy for ENR is scheduled to be completed during the second half of the 2008/09 fiscal year and will guide priority setting and investment strategies for the next three years. This new strategy will draw heavily from the goals, priorities and objectives of this departmental plan as well as those of the 16th Legislative Assembly.

The table below lists the major application systems supporting Environment and Natural Resources activities.

Application Name	*Description*
Forest Management Information System	Management Information System to assist the Forest Management division in decision support and operational management of our forests and related resources.
Environmental Assessment Tracking System (EATS)	New multidepartment system to support GNWT participation in environmental assessments and related activities.
Licensing Information System (LISIN)	System for Issuing and tracking licenses and permits such as hunting and fishing licenses and tags.
Compliance Database	Used to track and monitor progress on all occurrences, bear reports, officer patrols and other enforcement related of both Parks and Wildlife Officers.
Air Monitoring System	Tracks and reports on measured air quality from monitoring stations across the NWT and provide quantitative results for reporting purposes.
Spatial Data Warehouse	A data warehouse and web portal containing GNWT Spatial information for use by the GNWT and the public in support of their spatial or Geomatics activities.
Wildlife Management Information System	A web and GIS based system to store, analyze and distribute information and data related to wildlife studies.
Spills Database	System for tracking and reporting of hazardous waste spills in the NWT.

Planned Activities - 2009-10

In addition to organizational improvement activities such as improved planning, results reporting and project management discipline, the Informatics Division is undertaking the following systems development projects.

- **Electronic Records Management:** *ENR is one of the lead departments working on a GNWT wide initiative to implement an electronic records management system. The primary objective of the electronic records management system is to provide a system to allow the efficient storage and retrieval of information*

- **LISIN Phase II:** *Builds on the work completed during the 08/09 fiscal year by introducing new functionality to the application including support for additional wildlife permits; resource harvesting permits; enhanced vendor return data entry; license editing capability and associated audit trail; additional reporting requirements; and, enhanced security.*

- **Compliance Management Information System:** *An integrated system replacing a number of existing and dated applications currently utilized for tracking incidents such as occurrences, nuisance bears, spills, investigations, patrols and related compliance activities, as well as the system for tracking wildlife and parks officer appointments and status including the current safety training status and equipment and firearms related issues. This new system will help to improve the efficiency in monitoring and reporting on these key compliance matters consistent with current legislation.*

Planned Activities – 2010/11 and 2011/12

The completion of the strategic planning for information management and systems during 08/09 will establish priorities goals and objectives for the Informatics Division. Clear criteria for prioritization of projects and initiatives are already apparent and linkages to established priorities have been identified. Systems and Information Management Activities will focus on:

- Improving levels of and access to services for the residents and businesses of the NWT through the appropriate use of technology. This includes improvements to approaches for collaboration and consultation though the application of technology as well as the enabling of key services over the internet (e-government).

- Increasing the cooperation and collaboration of internal and external stakeholders through the use of technology to help achieve synergies and improve the decision support systems around matters such as regulatory processes and procedures or issues related to the management of the land and other similar initiatives.

- Maximizing operational efficiency of government by the prudent investment in technology in support of process efficiency and automation.

- Increasing the efficient and effective management of information and data in support of improving the quality and timeliness of analysis and business intelligence to support and improve departmental decision support systems.

In addition the following capital projects are proposed for the 2010/11 fiscal year:

- LISIN Phase III which focuses on improved access to residents and agents involved in the issuance of permits and licensing.
- Completion of the implementation of the Compliance Management Information System based on the analysis and design which will be completed during the 09/10 fiscal year.